North Carolina Electronic Laboratory Reporting (ELR) Checklist for Meaningful Use

This checklist will prepare you to implement an electronic laboratory reporting interface to the North Carolina Division of Public Health (N.C. DPH) and will assist with meeting the Meaningful Use (MU) Stage 1 and Stage 2 requirements for ELR. Please contact NCDPHMU@dhhs.nc.gov for further assistance.

Step 1: Register Intent to submit ELR			
	Yes	**Date**	**Comments & Resources**
Submit your registration via the N.C. DPH Meaningful Use Site for Registration of Intent (http://ncdphmeaningfuluse.org).	☐		**REQUIRED FOR STAGE 2 OF MU.**
Receive and retain your notification from N.C. DPH that your registration has been completed and received.	☐		

Step 2: Participate in initial planning discussion with N.C. DPH			
	Yes	**Date**	**Comments & Resources**
Download a free copy of HL7 Version 2.5.1 Implementation Guide: Electronic Laboratory Reporting to Public Health (US Realm).	☐		Available for download through the Health Level Seven (HL7) website. https://www.hl7.org/implement/standards/product_brief.cfm?product_id=98
Download the "Guidelines for Electronic Laboratory Reporting to North Carolina Division of Public Health" document.	☐		Available for download through the NC Electronic Health Records Meaningful Use Requirements for ELR website. http://epi.publichealth.nc.gov/cd/meaningful_use/elr_overview.pdf
Contact N.C. DPH to schedule an initial planning discussion.	☐		Send an email to NCDPHMU@dhhs.nc.gov or contact the ELR Project Manager.
Receive and retain your invitation to initiate on-boarding for electronic laboratory reporting from N.C. DPH.	☐		

Step 3: Identify laboratory results that are required by N.C. law to be reported to N.C. DPH			
	Yes	**Date**	**Comments & Resources**
Download the NC ELR Mapping Template.	☐		Available for download through the NC Electronic Health Records Meaningful Use Requirements for ELR website. http://epi.publichealth.nc.gov/cd/meaningful_use/elr.html
Fill in the NC ELR Mapping Template with the entire menu of services for your facility and indicate which tests are performed in-house versus sent out to a reference lab.	☐		
Indicate for each of the tests that are performed in-house if they are required to be reported under N.C. law. Also indicate which tests the facility is willing to voluntarily report to N.C. DPH.	☐		The rules for which laboratory results are required by North Carolina law to be reported to N.C. DPH can be found in the North Carolina General Statutes and Administrative code. A link to these regulations can be found on the N.C. DPH Communicable Disease Laws and Rules website. (http://epi.publichealth.nc.gov/cd/laws.html)

A list of the results that N.C. DPH can accept for voluntary reporting can be found in Appendix B of the "Guidelines for Electronic Laboratory Reporting to North Carolina Division of Public Health." http://epi.publichealth.nc.gov/cd/meaningful_use/elr_overview.pdf |

	Yes	Date	Comments & Resources
Once you have completed the "Step 3a: Reportable Review" tab, please submit it to N.C. DPH via the online N.C. ELR Mapping Tool Submission form.	☐		N.C. ELR Mapping Tool Submission form. https://app.smartsheet.com/b/form?EQBCT=a5631600d8bd4027aef279b2a854fbde

Step 4: Translate local codes to standard coding systems

	Yes	Date	Comments & Resources
Map local lab orders and tests performed codes to the Logical Observation identifiers Names and Codes (LOINC) standard vocabulary.	☐		Reference materials are available from the following websites: LOINC: loinc.org
Map local lab test result values to the Systemized Nomenclature of Medicine – Clinical Terms (SNOMED-CT) standard vocabulary.	☐		SNOMED-CT: www.nlm.nih.gov/research/umls/Snomed/snomed_main.html Public Health Information Network Vocabulary Access Distribution System (VADS) & Reportable Condition Mapping Table: https://phinvads.cdc.gov/vads/SearchVocab.action
Map local specimen types (sources) to the Systemized Nomenclature of Medicine – Clinical Terms (SNOMED-CT) standard vocabulary.	☐		
Map other local codes according to the HL7 2.5.1 Implementation Guide: Electronic Laboratory Reporting to Public Health (US Realm).	☐		For Example: HL7 defined tables for race, ethnicity, gender, etc.
Please complete the "Step 4a: LOINC Mapping," "Step 4b: Result Mapping," and "Step 4c: Specimen Type Mapping" tabs of the N.C. ELR Mapping Tool with the mapping of your local codes to these standard coding systems and submit it to N.C. DPH via the online NC ELR Mapping Tool Submission form.	☐		N.C. ELR Mapping Tool Submission form. https://app.smartsheet.com/b/form?EQBCT=a5631600d8bd4027aef279b2a854fbde

Step 5: Develop an HL7 Version 2.5.1 Message for ELR

	Yes	Date	Comments & Resources
Develop an HL7 message conformant to the HL7 2.5.1 Implementation Guide: Electronic Laboratory Reporting to Public Health (US Realm).	☐		Available for download through the Health Level Seven (HL7) website https://www.hl7.org/implement/standards/product_brief.cfm?product_id=98
Test ELR messages via self-service online validation tools, resolve issues found, and provide your successful validation results to N.C. DPH.	☐		National Institute of Science and Technology (NIST) website. http://hl7v2-elr-testing.nist.gov/mu-elr/ CDC's Message Quality Framework (MQF) ELR receiver profile. https://phinmqf.cdc.gov/

Step 6: Set up the secure message transport connectivity

	Yes	Date	Comments & Resources
N.C. DPH currently supports the Public Health Information Networking Messaging System (PHINMS) as the transport mechanism to send electronic laboratory results directly to N.C. DPH.	☐		For more information on PHINMS, please visit the CDC's website. http://www.cdc.gov/phin/tools/PHINms/index.html
N.C. DPH can also accept ELR messages sent through the North Carolina Health Information Exchange (NC HIE).	☐		
Contact the ELR Project Manager to request configuration of the transport mechanism at NCDPHMU@dhhs.nc.gov.	☐		

Step 7: Send a batch file containing a test message for initial validation			
	Yes	Date	Comments & Resources
Transmit a message containing a reportable result conformant to NC Regulations and to the HL7 2.5.1 Implementation Guide: Electronic Laboratory Reporting to Public Health (US Realm).	☐		If the message passes initial validation, coordinate automated daily message transmissions from the test system and/or production system. If the message does not pass initial validation, please continue message development and internal validation.
Receive and retain your confirmation that a successful test message has been received by N.C. DPH.	☐		

Step 8: Participate in structure and content validation			
	Yes	Date	Comments & Resources
N.C. DPH will perform structure and content validation.	☐		N.C. DPH will notify your facility during structure and content validation to discuss and resolve any discrepancies in messaging. If your facility is non-responsive, you many not fulfill the Stage 2 Meaningful Use objective for ELR.

Step 9: Participate in parallel data validation (User Acceptance Testing) with N.C. DPH			
	Yes	Date	Comments & Resources
N.C. DPH will perform data validation, comparing the electronic submissions from the production system against the existing reporting mechanism (e.g. mail or fax).	☐		N.C. DPH will notify your facility during parallel data validation to discuss and resolve any discrepancies in the data transmission. If your facility is non-responsive, you many not fulfill the Stage 2 Meaningful Use objective for ELR.

Step 10: Discontinue paper submissions to N.C. DPH			
	Yes	Date	Comments & Resources
N.C. DPH will transition your ELR reporting to the production surveillance system.	☐		
Receive and retain your notification that on-going submissions of electronic laboratory reporting of reportable results are being received by N.C. DPH from your facility.	☐		
Coordinate with N.C. DPH to determine a date to discontinue paper or faxed reporting of laboratory results and solely submit ELR.	☐		N.C. DPH and your facility will perform continual quality control checks. Also when your facility adds new in-house tests or new results which are reportable to public health, your facility must contact the ELR Project Manager (NCDPHMU@dhhs.nc.gov) to test and validate the sending of the new results via ELR.
Receive and retain your notification from the NC State Epidemiologist that your facility can discontinue paper or faxed reporting of laboratory results and solely submit ELR.	☐		

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